

Title (en)  
LIQUID PUMP, IN PARTICULAR FOR PROVIDING A SUPPLY TO A TRANSMISSION OR TO A CLUTCH IN THE DRIVE TRAIN OF A MOTOR VEHICLE

Title (de)  
FLÜSSIGKEITSPUMPE, INSBESONDERE ZUR VERSORGUNG EINES GETRIEBES ODER EINER KUPPLUNG IM ANTRIEBSSTRANG EINES KRAFTFAHRZEUGES

Title (fr)  
POMPE À LIQUIDE, EN PARTICULIER POUR ALIMENTER UNE TRANSMISSION OU UN EMBRAYAGE DANS LE TRAIN D'ENTRAÎNEMENT D'UN VÉHICULE À MOTEUR

Publication  
**EP 3835585 A1 20210616 (EN)**

Application  
**EP 20210099 A 20201126**

Priority  
DE 102019132711 A 20191202

Abstract (en)  
The application relates to a liquid pump, in particular for providing a supply to a transmission or to a clutch in the drive train of a motor vehicle, having a drive motor (2), having a pump module (3) which can be operated in two opposing directions of rotation, and having at least one inlet (26) and multiple outlets (28, 30, 32), each of which is assigned at least one check valve (36, 38, 39), characterized in that the pump module (3) is assigned a valve plate (5) in which, for each check valve (38, 39), a valve seat (34) and a receptacle (40) for a valve element (36, 38, 39) interacting with the valve seat (34) are provided.

IPC 8 full level  
**F04C 15/06** (2006.01); **F04C 2/10** (2006.01)

CPC (source: CN EP KR US)  
**F01C 21/10** (2013.01 - EP); **F04B 53/10** (2013.01 - CN); **F04B 53/1087** (2013.01 - CN); **F04C 2/10** (2013.01 - KR); **F04C 2/102** (2013.01 - EP US); **F04C 13/002** (2013.01 - US); **F04C 14/04** (2013.01 - US); **F04C 14/10** (2013.01 - KR); **F04C 14/24** (2013.01 - KR); **F04C 15/008** (2013.01 - KR); **F04C 15/066** (2013.01 - EP); **F04C 29/02** (2013.01 - US); **F16H 57/0435** (2013.01 - CN); **F16H 57/0436** (2013.01 - CN US); **F16H 61/0009** (2013.01 - CN); **F16H 61/0025** (2013.01 - CN); **F16N 13/20** (2013.01 - US); **F04C 2210/14** (2013.01 - US); **F04C 2240/30** (2013.01 - EP KR); **F04C 2240/40** (2013.01 - KR US); **F05B 2210/11** (2013.01 - KR); **F16H 57/0473** (2013.01 - US); **F16H 2061/0037** (2013.01 - CN)

Citation (search report)  
• [X] US 2010322810 A1 20101223 - SCHEPP RENE [DE], et al  
• [I] EP 1461533 A1 20040929 - LUK FAHRZEUG HYDRAULIK [DE]  
• [I] US 2015086405 A1 20150326 - KONAKAWA HIDEFUMI [JP], et al  
• [A] US 2014234124 A1 20140821 - RÜHLE GÜNTER [DE], et al

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Designated extension state (EPC)  
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DOCDB simple family (publication)  
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DOCDB simple family (application)  
**EP 20210099 A 20201126**; CN 202011388127 A 20201201; DE 102019132711 A 20191202; KR 20200166050 A 20201201; US 202017106359 A 20201130